

U.S. DEPARTMENT OF COMMERCE, PATENT AND TRADEMARK OFFICE		DATE: <u>03</u> April 2001 (03 04.2001)
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. APPLN. NO. (if known) Not Yet Assigned 09/806949
INTERNATIONAL APPLICATION NO.: PCT/NL00/00523	INTERNATIONAL FILING DATE: 24 July 2000 (24.07.00)	PRIORITY DATE CLAIMED: 26 August 1999 (26.08.99)
TITLE OF INVENTION: A METHOD FOR THE PROTECTION OF GERMINATING SEED AND PESTICIDE-COATED PELLETS		
APPLICANT(S) FOR DO/EO/US: LEGRO, Robert Jean; HONKOOP, Sijbert		
<p>Applicant hereby submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 USC 371(f)) The submission must include items(5), (6), (9) and (21) indicated below. <input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)): <ol style="list-style-type: none"> <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). <input type="checkbox"/> has been communicated by the International Bureau. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US) <input type="checkbox"/> A English translation of the International Application as filed (35 U.S.C. 371(c)(2)). <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> <input type="checkbox"/> are attached hereto (required only if not transmitted by the International Bureau). <input type="checkbox"/> have been communicated by the International Bureau. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. <input checked="" type="checkbox"/> have not been made and will not be made. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>ITEMS 11 to 20 BELOW CONCERN OTHER DOCUMENT(S) OR INFORMATION INCLUDED:</p> <p>04/10/2001 DISCLOSURE STATEMENT under 37 CFR 1.97 and 1.98. 00000138 09066849</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included. <input checked="" type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment <input type="checkbox"/> A substitute specification. <input type="checkbox"/> A change of power of attorney and/or address letter. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter2 and 35 USC 1821 - 1825 <input type="checkbox"/> A second copy of the published international application under 35 USC 154(d)(4) <input type="checkbox"/> A second copy of the English language translation of the international application under 35 USC 154(d)(4) <input checked="" type="checkbox"/> Other items or information: <p>TRANSMITTAL FORM; FEE CALCULATION; INTERNATIONAL APPLICATION CONSISTING OF 12 PAGES INCLUDING; 7 PAGES TEXTUAL SPECIFICATION, 1 PAGE OF 6 CLAIMS; 1 SHEET CONTAINING THE ABSTRACT; 3 SHEETS DRAWINGS; PCT/ISA/210 INTERNATIONAL SEARCH REPORT; PCT/RO/101 REQUEST; EXECUTED INVENTOR'S DECLARATION; REQUEST FOR PRIORITY AND PRIORITY DOCUMENT No. 1012918.</p>		

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JC08 Rec'd PCT/PTO 03 APR 2001

ATTORNEY'S DOCKET NO: 24544

U.S. APPLICATION NO. (if known) not yet assigned	INTERNATIONAL APPLICATION NO. PCT/NL00/00523	DATE: <u>03</u> April 2001 (<u>03</u> 04.2001)
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21. <u>x</u> The following fees are submitted: Basic National Fee (37 CFR 1.492(a)(1)-(5): Search Report has been prepared by the EPO or JPO:.....\$860.00 International preliminary examination fee paid to USPTO (37 CFR 1.482).....\$690.00 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).....\$710.00 Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO.....\$1000.00 International preliminary examination fee (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4).....\$ 100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =	CALCULATIONS \$860.00 \$860.00	PTO USE ONLY
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Surcharge of \$130.00 for furnishing the oath or declaration later than <u> </u> 20 <u> </u> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	\$	
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CLAIMS	NO. FILED	NO. EXTRA	RATE		
TOTAL	6 -20=	0	X \$ 18.00	\$	0.00
INDEPENDENT	2 - 3=	0	X \$ 80.00	\$	0.00
Multiple dependent claims(s) (if applicable)			+ \$260.00	\$	0.00
TOTAL OF ABOVE CALCULATIONS =				\$	860.00
Reduction by ½ for asserting small entity, if applicable. (Note 37 CFR 1.9, 1.27, 1.28).				\$.00
SUBTOTAL =				\$	860.00
Processing fee of \$130.00 for furnishing the English translation later than <u> </u> 20 <u> </u> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	0.00
TOTAL NATIONAL FEE =				\$	860.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$	40.00
TOTAL FEES ENCLOSED =				\$	900.00
				Amount to be:	
				refunded	\$
				charged	\$

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a. ☒ Two checks in the amount of \$900.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. 14-0112 in the amount of \$ _____ to cover the above fees. (A duplicate copy of this sheet is enclosed.)

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0112.


d. Fees are to be charged to a credit card ☐ WARNING: Information on this form may become public ☐ Credit Card Information should not be included on this form. ☐ Provide credit card information and authorization on PTO-2038 ☐

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed to request that the application be restored to pending status.

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Rev. 02/98

09/806949

JCO8 Rec'd PCT/PTO 03 APR 2001
BOX PATENT APPLICATION

Attorney Docket No. 24544

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Robert Jean LEGRO

Sijbert HONKOOP

Serial No. NOT YET ASSIGNED

Filed: April 3, 2001

For: **A METHOD FOR THE PROTECTION OF GERMINATING SEED AND PESTICIDE-
COATED PELLETS**

PRELIMINARY AMENDMENT

The Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examining on the merits and calculating the filing fee for the national phase application filed herewith, please amend the above-identified patent application as follows:

IN THE CLAIMS:

Please amend claims 3-5 as per attached with this preliminary amendment. Pursuant to the new rules implementing the AIPA, a clean copy of the amended claims is attached along with a marked-up copy of the claims indicating the proposed claim amendments.

REMARKS

The above amendments have been made to remove multiple dependencies from the claims, and no new matter has been added.

Respectfully submitted,
NATH & ASSOCIATES

By: 

Gary M. Nath
Registration No. 26,965
Customer No. 20529

Date: April 3, 2001
NATH & ASSOCIATES
1030th Street, NW - 6th Floor
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GMN/lis:AMENDpreml

[illegible]

1. Method for the protection of germinating seed coated with a pesticide, characterized in the seed-containing pellets and pesticide-containing pellets are sown as individual pellets at the same time.
2. Method according to claim 1, characterized in that the pesticide-containing pellets have substantially the same shape and size as the seed-containing pellets.
3. (Amended) Method according to claim 1, characterized in that the pesticide-containing pellets comprise a dosis of pesticide that is sufficient for one seed germ.
4. (Amended) Method according to claim 1, characterized in that the pesticide-containing pellets contain a filler material.
5. (Amended) Method according to claim 1, characterized in that the pesticide-containing pellets and the seed-containing pellets have a substantially uniform diameter tanging from 0.5-5 mm.
6. Pesticide-containing pellet to be used in combination with a seed-containing pellet.

MARKED UP COPY OF CLAIM AMENDMENTS:

1. Method for the protection of germinating seed coated with a pesticide, characterized in that seed-containing pellets and pesticide-containing pellets are sown as individual pellets at the same time.
2. Method according to claim 1, characterized in that the pesticide-containing pellets have substantially the same shape and size as the seed-containing pellets.
3. (Amended) Method according to [claim 1 or 2] claim 1, characterized in that the pesticide-containing pellets comprise a dosis of pesticide that is sufficient for one seed germ.
4. (Amended) Method according to [any of the above claims 1-3] claim 1, characterized in that the pesticide-containing pellets contain a filler material.
5. (Amended) Method according to [any of the above claims 1-4] claim 1, characterized in that the pesticide-containing pellets and the seed-containing pellets have a substantially uniform diameter from 0.5-5 mm.
6. Pesticide-containing pellet to be used in combination with a seed-containing pellet.

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A method for the protection of germinating seed and pesticide-coated pellets.

The present invention relates to a method for the protection of germinating seed coated with pesticide.

Such a method is known in the field. Usually pesticides, such as, for example insecticides and

5 fungicides are incorporated in the coatings of pelleted seeds.

The problem with many pesticides is that they can be rather phytotoxic for the germinating seed to which the pesticide is applied. One reason for this is the high
10 dosage in which the pesticide often must be applied to afford adequate protection against the pest to be fought. The negative effect may vary from retarded germination to abnormal seedlings, or even to a total lack of germination of part of the seeds. Of course, the degree in which
15 germination may be affected so negatively depends also on the type of pesticide, the seed species, the sensitivity of the variety, the vigour of the seed batch, and the environmental conditions during germination and emergence of the treated seed.

20 By covering the seed with a coating, the negative effect of the pesticide on the seed can be limited to some extent. For instance, the seed may be coated (pelleted) with a relatively thick layer of inert material on which the pesticide is applied in such a way that the pesticide
25 is not directly in contact with the seed.

However, a further disadvantage of this method of pelleting is that at high dosages such a coating affords insufficient protection against the possible phytotoxic effect of the pesticide. Furthermore, due to the high
30 dosages the coating's physiochemical properties may be changed significantly, indirectly producing a negative effect due to a change in the oxygen/water balance in the coating.

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The present invention has the aim to avoid these disadvantages. This aim is achieved according to the present invention by simultaneously sowing seed-containing pellets and pesticide-containing pellets as separate
5 pellets.

Because the seed germ and the pesticide are incorporated in separate pellets, the seed in the seed-containing pellet can germinate and grow before it comes into contact with the pesticide which will be released
10 from another pellet. Thus during the most vulnerable stage, the moment of germination, there is no contact yet with the pesticide.

It is noted that in the present invention the term pesticide-containing pellets also includes film-
15 coated inert cores (see example 3).

According to a preferred embodiment of the invention, the pesticide-containing pellets have substantially the same size and shape as the seed-containing pellets.

20 Since the pesticide-containing pellets are substantially the same size as the seed-containing pellets, it is thus possible with precision sowing machinery to sow one pesticide-containing pellet per plant. Thus in a simple way both sub- and overdose can be
25 effectively avoided.

According to a preferred embodiment of the invention the pesticide-containing pellets comprise a pesticide dosage which is sufficient for one seed germ.

Thus unnecessary waste of the expensive pesticide
30 is avoided, and furthermore there is the least possible impact on the environment.

According to another aspect of the method of the present invention, the pesticide-containing pellets contain a filler material.

35 By supplementing the exact dosage of pesticide with an appropriate amount of filler material, the size of the pesticide-containing pellet can be adapted to that of the seed-containing pellet.

According to an advantageous embodiment of the invention, both pesticide- and seed-containing pellets have a substantially uniform diameter ranging from of 0.5-5 mm.

5 The invention also relates to a pesticide-
containing pellet for use in combination with a seed-
containing pellet.

By sowing pellets having the same shape and size,
an optimal sowability with precision sowing machines can
10 be achieved.

According to the invention, the pesticide in the pesticide-containing pellet may be, for example, acaricides or miticides, bactericides, fungicides, herbicides, insecticides (e.g. Rovral® (Rhone Poulenc), Gigant® (DowElanco), Gaucho® (Bayer), Oncol® (Luxan), Mundial® (Rhone Poulenc), Birlane® (Cyanamid) etc.), molluscicides, nematocides and rodenticides are used but also growth hormones, nutrients, germination stimulants, micro organisms, pheromones, biological preparations, etc.

20 All types of filler material commonly used in the seed coating business can be used such as, for example, clay , perlite, diatomaceous earth, quartz, cellulose, vermiculite, mica, etc.

Naturally the pesticide-containing pellet may be
25 produced in any desired shape and size depending on the
seed-containing pellets to be sown at the same time.

The core of the pesticide-containing pellet according to the invention may be inert, for example, a glass-bead, perlite, plastic, pumice or any other suitable material. If desired however, it is also possible to use 30 killed, non-germinating seed (for example killed by heat treatment, gamma rays, microwave etc.) or other biodegradable organic material which has no detrimental effect on the seed germination.

35 Optionally according to the invention, a substance may be added to the pesticide-containing pill to regulate the release of the pesticide.

The present invention will now be further elucidated with reference to a number of exemplary embodiments. Figures 1-4 show alternative embodiments of a pesticide-containing pellet according to the invention.

5 Figure 1 shows a pesticide-containing pellet 1 with a core 2, which core is surrounded by the active material 3.

10 Figure 2 shows a pesticide-containing pellet 1 with a core 2, which core 2 is surrounded by a filler 4 provided with a coating of active material 3.

 Figure 3 shows a pesticide-containing pellet 1 with a core, core 2 is surrounded by an active material 3 provided with a coating of filler 4.

15 Figure 4 shows a pesticide-containing pellet 1 with a core 2, which core is covered successively with a layer of filler 4, a layer of active material 3 and a coating of filler 4.

20 Naturally the pesticide-containing pellets may have any shape as long as this shape substantially resembles the shape of the seed-containing pellets.

 Figure 5 shows a graph which illustrates the release of active component from a (viable) seed-containing pellet according to the prior art (solid line) in comparison with a pellet according to the present
25 invention (dotted line).

 Figure 6 shows germinated lettuce seedlings from seed-containing pellets sown separately but simultaneously with pesticide-containing pellets (present invention).

30 Figure 7 shows germinated lettuce seedlings from pellets containing both seed and pesticide (prior art).

 The invention will now be elucidated with reference to a number of non-limiting examples.

Example 1

35 One million lettuce seeds (*lactuca sativa*) in a batch weighing 1,10 gram per 1 thousand grains were killed by means of gamma-rays (40 kGy). The batch was pelleted according to the standard procedure, using a standard 100

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cm diameter pelleting-pan (Vingerlings Machinefabriek
b.v., Rotterdam, Netherlands).

This process entailed the alternating addition of
coating material (C-1, Incotec) and binding solution (Sol-
5 1, Incotec) providing pellets having a uniform shape and
size (3.25-3.5 mm slot screen).

Then the pellets were dried for 1.5 hours at
40°C. In a fume-cupboard, at room temperature, 2000 ml of
a commercial coating-formulation (Disco Color Red L083)
10 was mixed with 1143 g of insecticide powder Gaucho 70 WS®
(Bayer) and 2660 ml water. The batch of 1 million dried
pellets was processed in a Pancoater (Ramacota 36) of a
diameter of 36 inches according to the standard process.

This process entailed that during the entire
15 process (120 min.) the coating-mixture was evenly and
slowly distributed over the pellets while continuously
drying (drying temperature = 55°C), resulting in the
pellets as described in Figure 2. The insecticide is
comprised in the thin film of coating on the outside of
20 the pellet.

The above-mentioned pellets have a recovery of
98% (recovery measurements done by a HPLC) of the active
ingredient imidacloprid, the active component (a.c.) of
the Gaucho-formulation, measuring a distribution
25 coefficient of variation of 10%.

The insecticide is released into the water from
the produced Gaucho-pellets (800 g a.c./million pills) in
the same way as from the pellets comprising both the seed
and the Gaucho (800 gram a.c./million pellets) in the same
30 pellet (see Figure 5).

Figure 5. shows the release into water of the
active component from a viable seed-containing pellet
according to the prior art (solid line) and from a pellet
according to the invention (dotted line). Plotted are the
35 recovery in % against time (minutes).

The seed-containing pellets and the Gaucho-
containing pellets (800 gram a.c./million pellets) sown as
separate pills (Fig. 6) germinate more evenly than the

pellets that contain both live seed and Gaucho (800 g a.c./million pellets) in one pellet (see Fig. 7).

The above example is also applicable to other seed species, such as:

- 5 - Tobacco (*Nicotiana tabacum*) in the pellet size 1.75-2.00 mm with a dosis of 200 g imidacloprid/million pellets.
- Sugar beet (*Beta Vulgaris*) in the pellet size 3.75-4.50 mm with a dosis of 900 g imidacloprid/million pellets.

10

Example 2.

From a batch of three million glass-beads pellets were produced according to the standard procedure. The batch was processed in a pelleting pan with a diameter of 100 cm (Vingerlings Machinefabriek b.v., Rotterdam, Netherlands). In this method the coating material (C-22, Incotec) and binding solution (Sol-1, Incotec) were added alternately in order to produce pellets of homogeneous size and shape (1.50-1.75 mm slot screen).

Subsequently, the pellets were dried at 60°C for 45 minutes. In a fume-cupboard at room temperature 31.5 ml of a commercial coating formulation (Disco Color Red L083, Incotec) was mixed with 18.0 gram of insecticide powder Gaucho 70 WS® Bayer) en 10.4 ml of water. A batch of 90.000 dry pellets was placed in a 'Rotostat coating machine' with a diameter of 30 cm (Marline, Norfolk, England). The mixture of insecticide and coating formulation was applied by means of the standard 'spinning disc' (6 cm diameter). After 3 minutes process time, the mixture was distributed evenly over the pellets and the pellets were transferred to a standard pelleting pan. Alternately, finishing-material (F-13, Incotec) and binding solution (Sol-1, Incotec) were added in order to produce pellets of homogeneous size and shape (2.00-2.25 mm slot screen).

Then, the pellets were dried at a temperature of 60°C for 45 minutes resulting in pellets as described in Figure 4.

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Example 3

In a fume cupboard at room temperature, 345 g of a commercial coating formulation (Disco L126, Incotec) is mixed with 107 g insecticide formulation Gigant 480FS (DowElanco) and 11.5 g fungicide solution Rovral Aquaflo (Rhone Poulenc). A batch of 1495 gram cauliflower seeds (Brassica oleracea) with a seed-fraction of 1.50-1.75 mmR was killed by means of microwave (300W, 45 min., Samsung M935). The batch was processed according to the standard procedure in a Pancoater (Ramacota-18) with an 18 inch diameter. This procedure entailed that during the entire process the coating formulation was slowly distributed over the seeds by means of an air spray gun while continuously drying (drying temperature = 55°C) resulting in film-coated seeds as described in Figure 1. The insecticide is comprised in the thin layer of film coating on the outside of the 'dead' seed.

The present invention is not limited to the embodiments mentioned in the above examples. They can be varied in many ways, all deemed within the scope of the appended claims.

CLAIMS

1. Method for the protection of germinating seed coated with a pesticide, **characterized** in that seed-containing pellets and pesticide-containing pellets are sown as individual pellets at the same time.

5 2. Method according to claim 1, **characterized** in that the pesticide-containing pellets have substantially the same shape and size as the seed-containing pellets.

 3. Method according to claim 1 or 2, **characterized** in that the pesticide-containing pellets
10 comprise a dosis of pesticide that is sufficient for one seed germ.

 4. Method according to any of the above claims 1-3, **characterized** in that the pesticide-containing pellets contain a filler material.

15 5. Method according to any of the above claims 1-4, **characterized** in that the pesticide-containing pellets and the seed-containing pellets have a substantially uniform diameter ranging from 0.5-5 mm.

 6. Pesticide-containing pellet to be used in
20 combination with a seed-containing pellet.

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Abstract

The invention relates to a method for the protection of germinating seed from pesticide, wherein seed-containing pellets and pesticide-containing pellets are sown separately but simultaneously. According to a preferred embodiment of the invention, the pesticide-
5 containing pellets have substantially the same shape and diameter as the seed-containing pellets, and the pesticide-containing pellets comprise the exact dosis of pesticide that is sufficient for one seed germ. Generally, the
10 pellets with pesticide have a diameter ranging from 0,5-5.0 mm.

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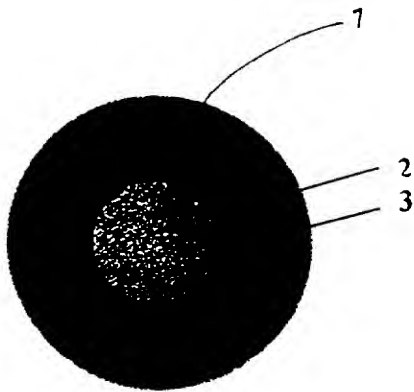


Figure 1

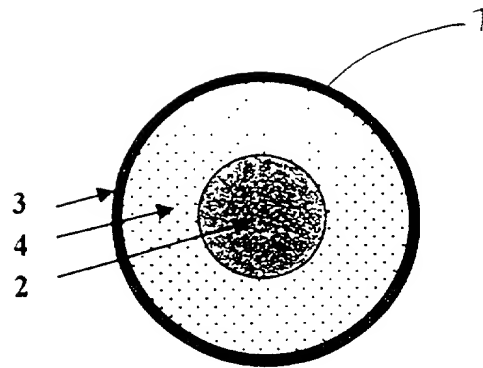


Figure 2

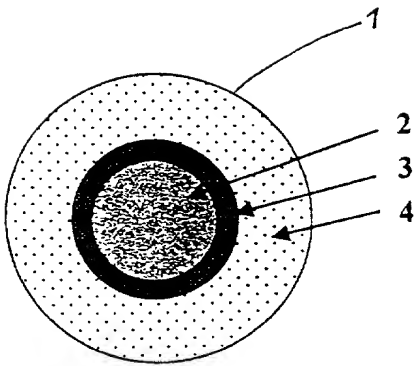


Figure 3

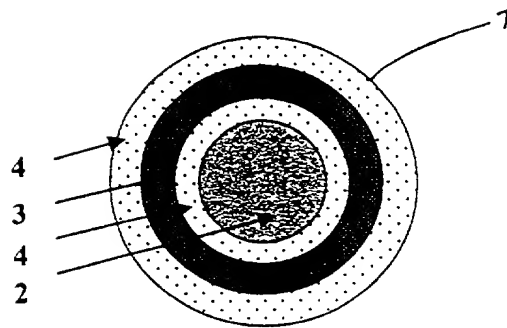


Figure 4

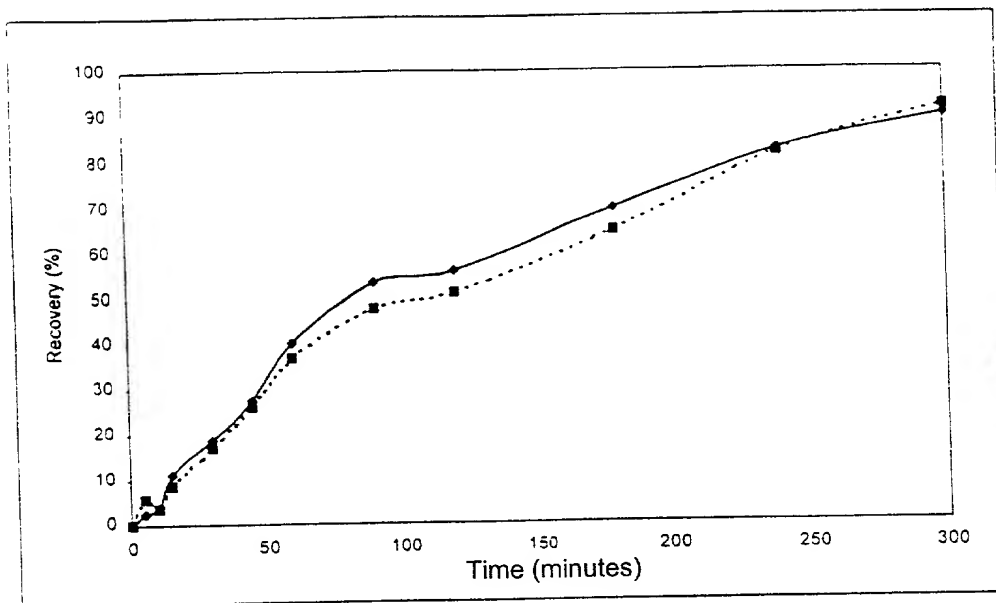


Figure 5

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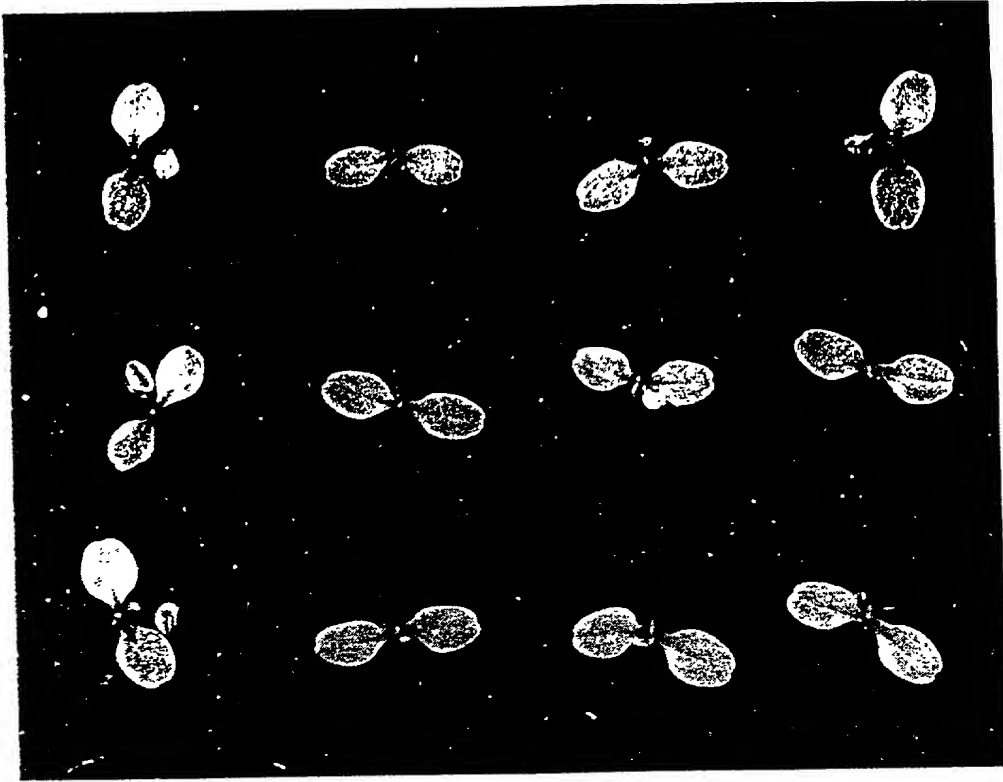


Figure 6

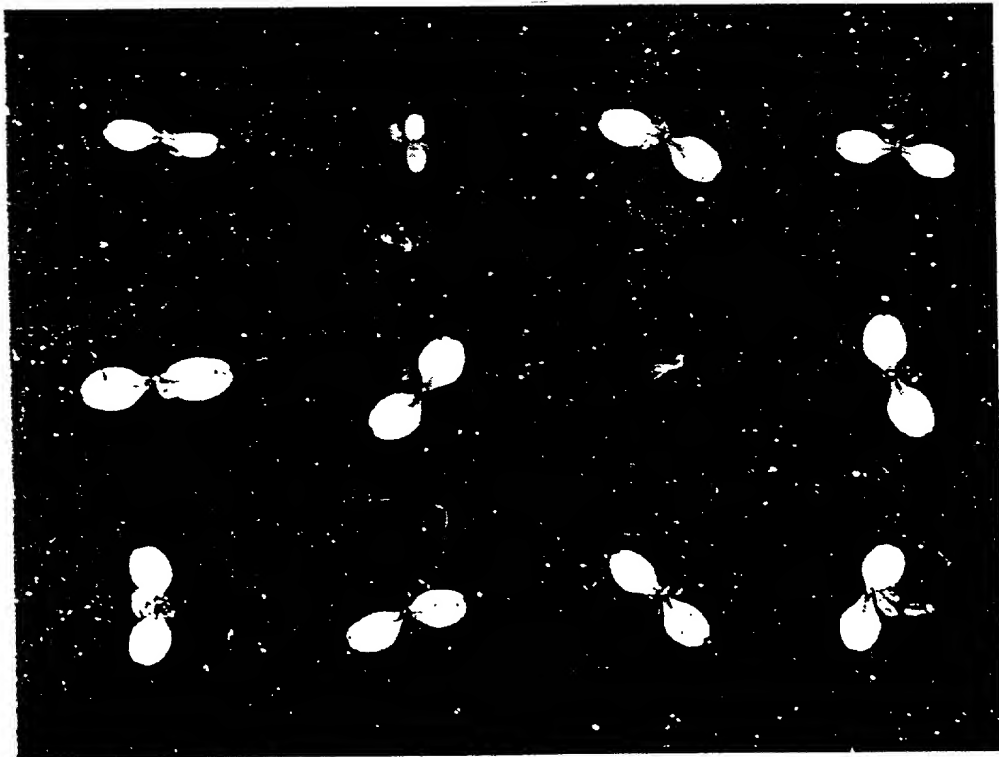


Figure 7

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DECLARATION FOR PATENT APPLICATION

Attorney Docket: 24544
Page 1 of 2

As a below-named inventor(s), I/we hereby declare that:

My/Our residence(s), post office address(es) and citizenship(s) is/are as stated below next to my/our name(s).

I/We believe I/we am/are the original inventor, first and sole (if only one name is listed below) or the original, first and joint inventors (if plural names are listed below) of the subject matter which is claimed, and for which a patent is sought on the invention entitled:

A PROCESS FOR THE PROTECTION OF GERMINATING SEED AND PESTICIDE CONTAINING PILL
the specification of which: (check one)

☐ is attached hereto.

☒ was filed on 24 July 2000, as Serial No. PCT/NL00/00523,

and was amended on _____ (if applicable).

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the patentability of this application as defined by 37 CFR § 1.56.

We hereby claim foreign priority benefits under 35 U.S.C. § 119 of any foreign application(s) for patent or inventor's certificate listed below, and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Applications:

			Priority Claimed	
<u>1012918</u>	<u>NL</u>	<u>26 / August / 1999</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(Application No.)	(Country)	(Day/Month/Year Filed)	Yes	No
_____	_____	_____ / _____ / _____	<input type="checkbox"/>	<input type="checkbox"/>
(Application No.)	(Country)	(Day/Month/Year Filed)	Yes	No
_____	_____	_____ / _____ / _____	<input type="checkbox"/>	<input type="checkbox"/>
(Application No.)	(Country)	(Day/Month/Year Filed)	Yes	No

We hereby appoint Gary M. Nath, Reg. No. 26,965; Harold L. Novick, Reg. No. 26,011; Todd L. Juneau, Reg. No. 40,669; Lee C. Heiman, Reg. No. 41,827; Jerald L. Meyer, Reg. No. 41,194; Joshua B. Goldberg, Reg. No. 44,126; David R. Murphy, Reg. No. 22,751; Paul A. Sacher, Reg. No. 43,418; Nahied K. Usman, Reg. No. 47,148; Roger Hahn, Reg. No. 46,376; and Marvin C. Berkowitz, Reg. No. P-47,421; as my attorneys to prosecute this application and transact all business in the U.S. Patent and Trademark Office connected therewith.

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Washington, D.C. 20005 U.S.A.

We hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by 35 U.S.C. § 112, first paragraph, I/we acknowledge the duty to disclose material information as defined in 37 CFR § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(U.S. Application Serial No.)	(U.S. Filing Date)	(Status--patented, pending, abandoned)
_____	_____	_____
(U.S. Application Serial No.)	(U.S. Filing Date)	(Status--patented, pending, abandoned)
_____	_____	_____

DECLARATION FOR PATENT APPLICATION	Attorney Docket: 24544 Page 2 of 2
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DECLARATION FOR PATENT APPLICATION	Attorney Docket: 24544 Page 2 of 2
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We hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor: Robert Jean LEGRO

Inventor's Signature [Signature] Date 12 MARCH 2001

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a) 1990-1991		b) 1991-1992		c) 1992-1993		d) 1993-1994		e) 1994-1995		f) 1995-1996		g) 1996-1997		h) 1997-1998		i) 1998-1999		j) 1999-2000		k) 2000-2001		l) 2001-2002		m) 2002-2003		n) 2003-2004		o) 2004-2005		p) 2005-2006		q) 2006-2007		r) 2007-2008		s) 2008-2009		t) 2009-2010		u) 2010-2011		v) 2011-2012		w) 2012-2013		x) 2013-2014		y) 2014-2015		z) 2015-2016		aa) 2016-2017		ab) 2017-2018		ac) 2018-2019		ad) 2019-2020		ae) 2020-2021		af) 2021-2022		ag) 2022-2023		ah) 2023-2024		ai) 2024-2025		aj) 2025-2026		ak) 2026-2027		al) 2027-2028		am) 2028-2029		an) 2029-2030		ao) 2030-2031		ap) 2031-2032		aq) 2032-2033		ar) 2033-2034		as) 2034-2035		at) 2035-2036		au) 2036-2037		av) 2037-2038		aw) 2038-2039		ax) 2039-2040		ay) 2040-2041		az) 2041-2042		ba) 2042-2043		bb) 2043-2044		bc) 2044-2045		bd) 2045-2046		be) 2046-2047		bf) 2047-2048		bg) 2048-2049		bh) 2049-2050		bi) 2050-2051		bj) 2051-2052		bk) 2052-2053		bl) 2053-2054		bm) 2054-2055		bn) 2055-2056		bo) 2056-2057		bp) 2057-2058		bq) 2058-2059		br) 2059-2060		bs) 2060-2061		bt) 2061-2062		bu) 2062-2063		bv) 2063-2064		bw) 2064-2065		bx) 2065-2066		by) 2066-2067		bz) 2067-2068		ca) 2068-2069		cb) 2069-2070		cc) 2070-2071		cd) 2071-2072		ce) 2072-2073		cf) 2073-2074		cg) 2074-2075		ch) 2075-2076		ci) 2076-2077		cj) 2077-2078		ck) 2078-2079		cl) 2079-2080		cm) 2080-2081		cn) 2081-2082		co) 2082-2083		cp) 2083-2084		cq) 2084-2085		cr) 2085-2086		cs) 2086-2087		ct) 2087-2088		cu) 2088-2089		cv) 2089-2090		cw) 2090-2091		cx) 2091-2092		cy) 2092-2093		cz) 2093-2094		da) 2094-2095		db) 2095-2096		dc) 2096-2097		dd) 2097-2098		de) 2098-2099		df) 2099-2100		dg) 2100-2101		dh) 2101-2102		di) 2102-2103		dj) 2103-2104		dk) 2104-2105		dl) 2105-2106		dm) 2106-2107		dn) 2107-2108		do) 2108-2109		dp) 2109-2110		dq) 2110-2111		dr) 2111-2112		ds) 2112-2113		dt) 2113-2114		du) 2114-2115		dv) 2115-2116		dw) 2116-2117		dx) 2117-2118		dy) 2118-2119		dz) 2119-2120		ea) 2120-2121		eb) 2121-2122		ec) 2122-2123		ed) 2123-2124		ee) 2124-2125		ef) 2125-2126		eg) 2126-2127		eh) 2127-2128		ei) 2128-2129		ej) 2129-2130		ek) 2130-2131		el) 2131-2132		em) 2132-2133		en) 2133-2134		eo) 2134-2135		ep) 2135-2136		eq) 2136-2137		er) 2137-2138		es) 2138-2139		et) 2139-2140		eu) 2140-2141		ev) 2141-2142		ew) 2142-2143		ex) 2143-2144		ey) 2144-2145		ez) 2145-2146		fa) 2146-2147		fb) 2147-2148		fc) 2148-2149		fd) 2149-2150		fe) 2150-2151		ff) 2151-2152		fg) 2152-2153		fh) 2153-2154		fi) 2154-2155		fj) 2155-2156		fk) 2156-2157		fl) 2157-2158		fm) 2158-2159		fn) 2159-2160		fo) 2160-2161		fp) 2161-2162		fq) 2162-2163		fr) 2163-2164		fs) 2164-2165		ft) 2165-2166		fu) 2166-2167		fv) 2167-2168		fw) 2168-2169		fx) 2169-2170		fy) 2170-2171		fz) 2171-2172		ga) 2172-2173		gb) 2173-2174		gc) 2174-2175		gd) 2175-2176		ge) 2176-2177		gf) 2177-2178		gg) 2178-2179		gh) 2179-2180		gi) 2180-2181		gj) 2181-2182		gk) 2182-2183		gl) 2183-2184		gm	
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